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July 16, 2004

Law Enforcement Officers' & Firefighters' Plan 2 Retirement Board
P.O. Box 40918
Olympia, Washington 98504-0918

Re: Actuarial review for HB 2419 (surviving spouse benefit for
active members "killed in the course of employment")

Chairman Fox and Members of the Board:

There follow the results of our actuarial review of the LEOFF 2 contribution rate increases contained in the Fiscal Note for HB 2419 (removing the early retirement reduction factor from the surviving spouse benefit for active members "killed in the course of employment").

Background

Prior to the enactment of HB 2419, the spouses of active members who died in service after 10 years of service could elect to receive either 150% of the member's account or an annuity equal to the member's accrued benefit actuarially reduced for early retirement and election of the 100% joint and survivor option. HB 2419 increased the annuity benefit payable upon the death of active members who are "killed in the course of employment" by removing the early retirement reduction factor. The effective date of HB 2419 is 6/10/2004.

The Fiscal Note for HB 2419 was written by the Office of the State Actuary (OSA). The recommended contribution rate increases contained in the fiscal note are shown below.

LEOFF 2 Contribution Rates	HB 2419 Increase
Employee	0.01%
Employer	0.01%
<u>State General Fund</u>	<u>0.00%</u>
Total	0.02%

Results of Review

Assumptions and Methods

We reviewed the assumptions (.02% probability of death as defined in the bill and 60% probability that the member will have an eligible surviving spouse who will elect the annuity benefit) and consider them and the methods used reasonable for valuation of the improved death benefit.

Contribution Rates

We independently calculated the increases in the LEOFF 2 Actuarial Present Value of Projected Benefits and contribution rates for HB 2419. The results of our calculations agreed with both the increase in the LEOFF 2 Actuarial Present Value of Projected Benefits (\$3 million) and the recommended increases in the LEOFF 2 contribution rates contained in the fiscal note.

Conclusions


Contribution rates shown in the Fiscal Note are appropriate for the funding of LEOFF 2 with an estimated implementation date of September 1, 2004.

The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Sincerely,



Marilyn M. Oliver, F.S.A., M.A.A.A.
Actuary and Principal
Oliver Consulting
Contractor



John E. Bartel, A.S.A., M.A.A.A.
President
Bartel Associates, LLC
Peer Review

Cc.

Steve Nelsen, Executive Director
Matthew M. Smith, State Actuary

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Law Enforcement Officers' & Firefighters' Plan 2 Retirement Board
P.O. Box 40918
Olympia, Washington 98504-0918

Re: Actuarial review for HB 2418 (disability benefit for active
members "disabled in the line of duty")

Chairman Fox and Members of the Board:

There follow the results of our actuarial review of the LEOFF 2 contribution rate increases contained in the Fiscal Note for HB 2418 (10% of final average compensation minimum disability annuity for duty disablements, optional contribution account refund increased to 150% for duty disablements with less than 10 years service).

Background

Prior to the enactment of HB 2418, disabled members could elect to receive either their contribution account (150% of the account for member's with 10 years service) or an annuity equal to the member's accrued benefit actuarially reduced for early retirement. For members "disabled in the line of duty" HB 2418 increased the account refund for members with under 10 years service to the 150% level and increased the annuity benefit by adding a 10% of final average salary minimum. The effective date of HB 2418 is 6/10/2004. The bill applies to duty disablements on or after January 1, 2001.

The Fiscal Note for HB 2418 was written by the Office of the State Actuary (OSA). The recommended contribution rate increases contained in the fiscal note are shown below.

Employee	0.01%
Employer	0.01%
<u>State General Fund</u>	<u>0.00%</u>
Total	0.02%

Results of Review

Assumptions

1. We reviewed the .085% duty disability assumption used by the Office of the State Actuary. This duty disability assumption was derived by applying the percentage of duty vs. total disablements under LEOFF 1 (85%) to the total rates of disablement under WSPRS (.1%).

This was a reasonable approach based on the data constraints and the nature of the plan improvements being costed. The bill had the most impact on members disabled at the younger ages. The .1% rate falls within the range of disability assumptions being used at these ages by other public retirement systems.

2. In the calculations, duty disabled members with 20 years of service who have not reached age 50 are assumed to elect to retire immediately on disability retirement¹ rather than to defer their retirement to age 50² - even though at the point of their decision, the deferred benefit is about 25% more valuable on average. We believe that the costs should be modified to assume that, in spite of the tax advantage for duty disability retirement, a percentage of members close to age 50 will elect the deferred vested benefit, rather than the immediate disability benefit. We recommend the use of the following deferred retirement election percentages at ages 49 through 45 respectively: 95%, 90%, 80%, 70%, 50%, and recommend an assumption of 25% at ages 44 and below. This assumption has been reviewed with the Office of the State Actuary and they concur with this recommendation.

Retroactive Provision of the Bill

The bill contains a retroactive implementation date of January 1, 2001, the impact of which was not included in the fiscal note pricing. No firm data is available regarding the ultimate number or demography of affected members. Due to the uncertainty involved in pricing the feature at this time and because it is a one-time event whose cost impact is anticipated to be modest and will be known with certainty within the next few years, we recommend that liabilities due to this provision be incorporated in valuations and the ensuing contribution rates when they are known, as part of the normal actuarial gain/loss funding process.

¹ Members age 50 or over with 20 years of service are assumed to elect service rather than disability retirement.

² For members terminating with at least 20 years of service, the deferred vested benefit payable at age 50 includes more favorable early retirement reduction factors and a 3% per year benefit increase during the deferral period.

Contribution Rates

We independently calculated the increases in the LEOFF 2 Actuarial Present Value of Projected Benefits and contribution rates for HB 2418. The revised assumption regarding members with 20 years of service increased the Actuarial Present Value of Projected Benefits by \$.6 million (from \$1.4 to \$2.0 million). However, this increase in present value did not change the contribution rates and our contribution rate results continued to agree with those in the fiscal note.

Conclusions

Contribution rates shown in the Fiscal Note are appropriate for the funding of LEOFF 2 with an estimated implementation date of September 1, 2004.

The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Sincerely,



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